

CLAIMS

What is claimed as invention is:

1. An auto-on circuit for an audio device, said auto-on circuit comprising:  
a field effect transistor (FET) adapted to pinch off charge carriers when said  
5 auto-on circuit is in an "off" state;  
a capacitor connected to said FET and adapted to be charged and discharged,  
and if not discharged will charge to a pre-determined threshold causing said FET to pinch  
off; and  
an audio sensing comparator connected to said capacitor and having an open  
10 drain output and an input, said input adapted to be dropped in value below a pre-determined  
threshold limit when presented with an audio peak, and wherein said drop in value causes  
said output to go low, causing said capacitor to discharge and said FET to supply current to  
the circuit.
- 15 2. The auto-on circuit for an audio device of claim 1 including a wireless transmitter  
having an audio plug adapted for mating with an output jack of an audio source.
3. The auto-on circuit for an audio device of claim 2 wherein said audio source is  
selected from the group consisting of a portable stereo radio, cassette player, CD player, and  
20 MP3 player.
4. The auto-on circuit for an audio device of claim 1 wherein said capacitor is  
connected to a battery.
- 25 5. The auto-on circuit for an audio device of claim 4 wherein said capacitor is  
charged to battery voltage when said circuit is in an "off" state.
6. The auto-on circuit for an audio device of claim 4 wherein said capacitor

accumulates charge in an absence of audio pulses.

5 7. The auto-on circuit for an audio device of claim 1 wherein said comparator has a polarity, and said polarity is reversed to sense positive going peaks to discharge said capacitor.

10 8. The auto-on circuit for an audio device of claim 1 further including a power saving auto-off circuit wherein said comparator input is increased in value to said predetermined threshold limit when audio pulses are not present for a period of time, causing the FET to pinchoff.

9. A method for automatically turning a wireless transmitter for an audio source on or off in response to the presence or absence of audio pulses, said method comprising the steps of:

15 pinching off charge carriers in a field effect transistor (FET) when the circuit is in an "off" state;

permitting a capacitor to charge to a pre-determined threshold to cause the FET to pinchoff;

20 dropping an audio sensing comparator input in value below a pre-determined threshold limit when presented with an audio peak, wherein said drop in value causes the capacitor to discharge and the FET to supply current to the circuit, and maintaining the comparator input in value above the pre-determined threshold limit when audio pulses are not presented for a period of time.

25 10. The method of claim 9 further including the step of:

providing an audio plug adapted for mating with an output jack of an audio source.

11. The method of claim 9 further including the step of:

connecting the capacitor to a battery.

12. The method of claim 11 further including the step of:

charging the capacitor to battery voltage when the circuit is in an "off" state.

13. The method of claim 11 further including the step of:

accumulating charge in the capacitor in the absence of audio pulses.

14. The method of claim 9 further including the step of:

reversing the polarity of the comparator to sense positive going peaks to discharge the capacitor.